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W. & H.

An Inaugural Dissertation  
on  
Cholera Infantum  
by  
Edward Swain  
Pennsylvania.

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To John Phillips M.D. of Bristol Pennyl<sup>a</sup>  
 A person eminently distinguished for his extensive  
 acquaintance with the whole circle of medical  
 science, and for his politeness as a gentleman.

This dissertation is inscribed  
 with sentiments of gratitude and  
 respect, by his friend and pupil,  
 Ed<sup>d</sup> L. Davis.

*[Faint, illegible handwriting, likely bleed-through from the reverse side of the page.]*



To the Medical Professors  
of the University of Pennsylvania

Impressed with all the esteem and respect that a pupil can feel for his teachers conscious of your unremitting zeal to inspire your pupils with a lasting study and observation,

Permit me in leaving the school where I have had the honor to finish my medical education, to return you my warmest acknowledgements for the useful information I have received from your valuable lectures and believe me that I shall ever bear a lively recollection of the pleasure with which I attended you.

To your reputation as men of science I can add nothing; the high estimation of the University is sufficient to distinguish you as worthy professors, justly meriting honor and respect.

Gentlemen

Your very humble servant  
Ch<sup>s</sup> Rooin

\* Grey and Black. Comp. View

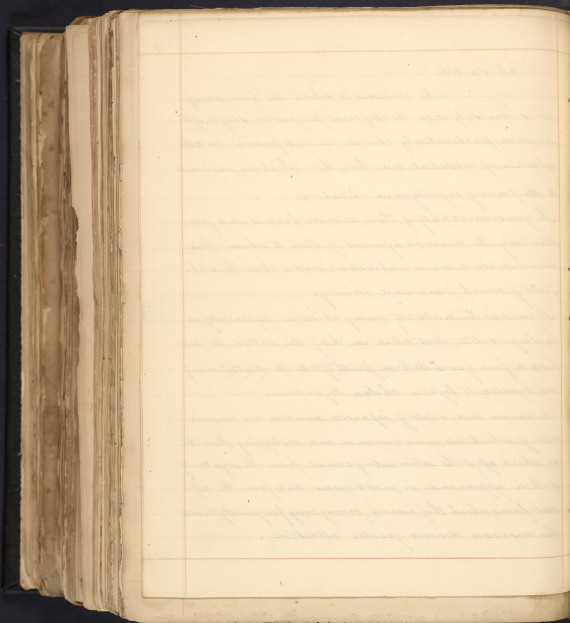
## Introduction

No diseases to which the human species are subject, in the different progressive stages of life, more particularly claim our compassion, and the attention of medical aid than those which are incident to the period of infancy and childhood.

The great vulnerability of their delicate frames, and particularly the mismanagement of those to whom their immediate care is entrusted, render them the subjects of much pain and misery.

A great is the mortality among children, especially in large cities. That above one half die within the first four or five years; and one fourth of all the deaths nearly are reported to be from Cholera Infantum.

The causes and seats of infantile diseases are various: none of which are more common and distressing than those which affect the alimentary canal, from the irregularity of their appearance in most seasons, and from the different forms which they assume, proving very frequently mortal diseases deserve greater attention.



### Phlebotomy Infantum

This is a disease which prevails throughout these United States during the warmer months of summer and beginning of autumn, its march is rapid and traces of its severe inflictions, and widely spread desolations are annually apparent.

It makes its appearance sooner or later according to the season and section of country in which it is found with us it seldom shows itself before the middle of June, or the commencement of our summer months occasionally not ceasing its ravages before the colder days of autumn or the season of frost, it generally assumes a more dangerous aspect, in proportion as the heat of the season increases.

The temperature of the weather has a very considerable effect on this disease, great vicissitudes of heat and cold, sudden and long continued rains after a very dry state of the atmosphere, generally favour the operation of the exciting causes, hence the reason why in some years it proves so alarming



and distending, whilst in others, from the mild and more uniform temperature of the atmosphere, it is of comparatively rare occurrence.

This disease may arise at any period of the infantile life, though we find it most generally occurs from the fifth to the twelfth month after birth to the third or fourth year, and is particularly fatal during the second summer.

Cholera Infantum does not appear to be a distinct disease from intermitting, and remitting fever, and cholera morbus in adults, but a variety of the same. This may be inferred from the same causes inducing these several diseases, with this difference only, that the exciting cause, with less force will produce morbid action in children who are predisposed to the disease.

Symptoms. It is sometimes ushered in by a diarrhoea which will continue for several days without

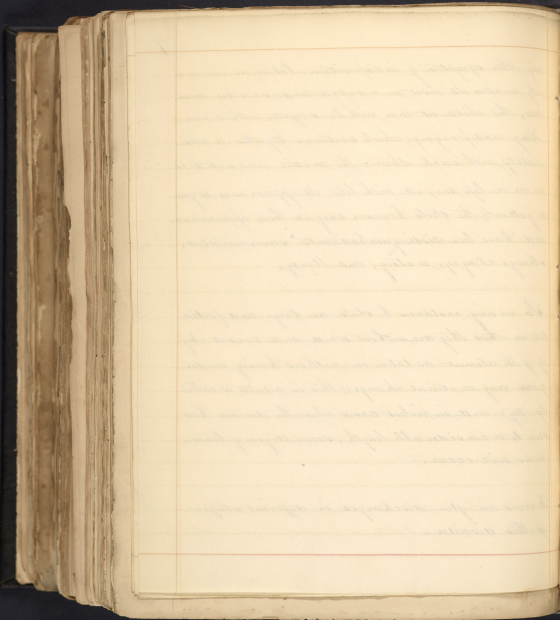
• Underwood on the diseases of children.



any other symptom of indisposition, but more commonly makes its onset in a rapid and sudden manner, the child at once will be seized with a vomiting and purging which continue together, alternately with each other; the matter evacuated is more or less mixed with bile, its appearance is green or yellow; the stools however vary in their appearance, and have been distinguished into: sour, curdled, slimy, clayey, watery, and bloody.

In many instances the stools are large and foetid but in others they are without smell and consist chiefly of the aliment as taken in, without having undergone any material changes (this in adults is called dysentery) and in violent cases when the disease has run to a considerable length, some degree of tenesmus will occur.

It is sometimes discharged in different stages of this disease -



The symptoms enumerated are accompanied with a fever which is of remitting kind, and discharges evident evacuations especially in the evening, and like many other bilious disorders of the season is marked with morning remissions.

The pulse is generally small and quick, though sometimes full and hard, countenance pale, wan, and languid, eyes sunk and dull, temperature unequal, the abdomen often swells and is remarkably hot, the child moans and sighs much, enjoys but little sleep, rolling about its head, or constantly putting its hands up to its face denoting a disorder of the brain.

One of the most frequent and distressing symptoms in this formidable complaint is a severe pain or gripping in the bowels, this may be known by the child's starting, by frequent fits of crying and the forcible contraction of its arms and feet towards the stomach.

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The duration of this disease is various, depending much on the manner in which it comes on, the habit and changes of weather &c.

If the first attack is with violence and light nature, all the alarming symptoms suddenly increase till the strength of the patient is rapidly diminished, when a fainting comes on, attended with cold sweats, cold extremities, and pulsation tendinum, which sometimes puts an end to the unhappy sufferer in the term of one day.

A hot and dry, a hot and moist, atmosphere seldom fails to increase all the violence of the disease, when as a cold day very frequently abates its violence, and disposes it to a favourable termination,

It continues in some instances with but few occasional alterations for a six weeks, and even three or four months, before any considerable change takes



place, when the symptoms grow more numerous and distressing, the body becomes emaciated to such a degree that the bones in some cases almost protrude through the skin; a constant inclination to stool takes place though but little matter can be raised, and that of a watery consistence, or of a green colour.

The eyes become languid, and sink deep within their sockets the features are contracted, and spots appear a sore mouth hicough, convulsions and a strongly marked Hippocratic countenance generally precede the fatal termination of this disorder.

### Treatment

As this disease like all other bilious disorders of the same season, is attended with an inflammatory diathesis in the beginning; the first indications of cure when we are called, early, are to remove the exciting cause and lessen the morbid excitement, with these views, the first passages should

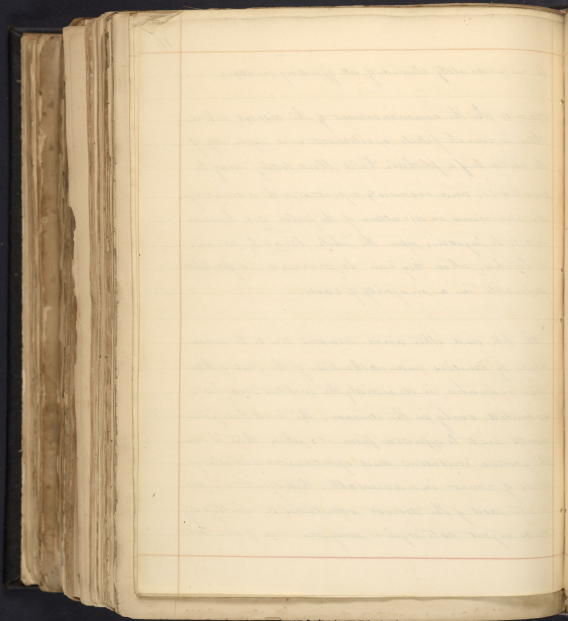




to immediately clear of all offending matter;

*second* In the commencement of the disease, when there is much febrile excitement and especially if the child be of a plethoric habit blood letting may be resorted to, and occasionally repeated, with advantage. The incisive indications of the pulse are however not to be forgotten, upon the whole, *local* by means of leeches, when they can be procured, is perhaps preferable in a majority of cases.

The bile and other acrid matters are to be evacuated by emetics and cathartics, of the first of these ipecacuanha is decidedly the mildest and best, exhibited early in the disease, the most tempestuous results are to be expected from it: when there is much gastric irritation and spontaneous vomiting it is of course inadmissible. These symptoms are in the onset of the disease sometimes so distressing and urgent as to require every resource of our art.



The remedies most usually resorted to are as follows  
 Fig - lime water and milk. flannels steeped in li-  
 que and aromatic herbs, the spice plaster. The warm  
 both anodyne injections. Distills to the arms legs and  
 region of the stomach, by taking the determination  
 from the alimentary canal, are attended with the  
 most salutary effects.

The bowels should be opened by the use of gentle lax-  
 atives, such as castor oil, with a little laudanum Ma-  
 gnesia, or a solution of opium salts.

The system being prepared, we give calomel, in it  
 we chiefly confide, as possessing properties eminently  
 adapted to the disease; we do not estimate its  
 effects, solely on account of its purgative qualities,  
 its specific action on the glandular, and hepatic  
 system, its power of exciting morbid excretions  
 entitles it to our highest confidence given either al-  
 lone or in combination with opium or ipecac or

• *Stye on charasmus.*

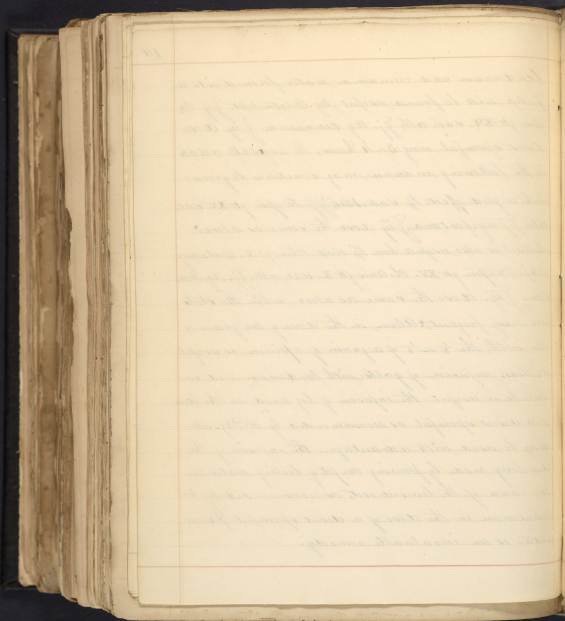
both in proportion to the nature and urgency of the case it will rarely fail to bring down bilious stools. To a child in its second summer may be given calomel gr.ij. gum opii gr. iij. specac. gr. iij. every three or four hours.

A late writer of considerable repute advises the administration of calomel, in minute doses, such as the  $\frac{1}{2}$  of a grain every half hour and its effects in this way are often exceedingly beneficial.

But when the spontaneous discharges have been considerable from the alimentary canal producing a prostration of strength, febleness of pulse, and a coldness of the extremities, we may conclude that the disease has already sufficiently (or too much) reduced the system, and that all further evacuations by artificial means would be highly improper, because must now be had to remedies to subdue the diarrhoea, and support the strength of the patient by, pepsina chalk with vapor -

†\* *Chapman.*

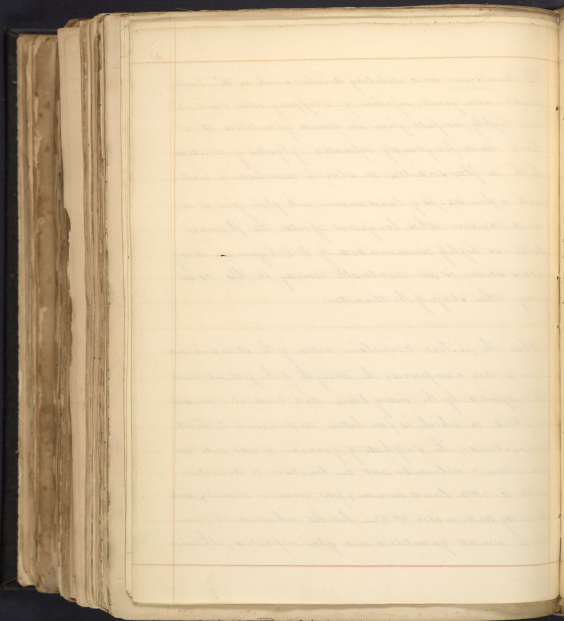
laudanum and cinnamon water formed into a  
 julep will be found useful. ℞j Cineta. ppt. ℥ij ℞  
 opii ꝑ℥ XV. sac. alb. ℥j. Ag Cinnamon ℥ij dose  
 desicc & pomful every 3 or 4 hours. the vegetable alkali  
 in the following manner may sometimes be given  
 with a good effect. ℞ sac. tart. ℥j ℞ opii ꝑ℥ XV. sac.  
 alb. ℥j ag. fontana. ℥ij dose the same as above.  
 shut out is also useful here ℞ Rad. Rhiz ꝑ℥ I. Galanog.  
 ꝑ℥ Xj. ℞ opii ꝑ℥ XV. cl.anis ꝑ℥ I. sac alb. ℥j, ag. Fon-  
 tana. ℥ij. dose the same as above when the stools  
 are very frequent, Alum in the dose of one grain a  
 doz with the & a's of a grain of opium is useful  
 ℞ Tinct. infusion of galls with laudanum and co-  
 lumbe is useful. the infusion of log-wood in the dose  
 of a desicc & pomful as recommended by Le-Physick  
 may be used with advantage. the infusion of the  
 dew-berry made by pouring one pt. of boiling water on  
 one ounce of the bruised root, as recommended by Le-  
 Chapman in the dose of a desicc & pomful ꝑ℥ss.  
 nata. is an invaluable remedy.





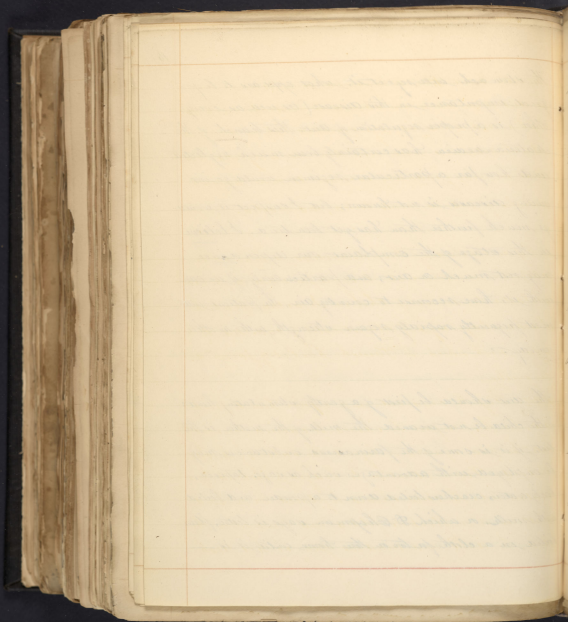
Demulcent and diluting drinks, such as thin barley water, rice gruel, infusion of slippery elm bark &c are highly usefull given in small quantities at a time and frequently repeated; glysters of mutton broth, or flaxseed tea, or starch dissolved in water with a few drops of laudanum, will often give ease and produce other beneficial effects. The flannel collar is highly recommended by Dr Chapman many years since, is an invaluable remedy in this, as in every other stage of the disorder.

When the violent convulsive action of the stomach and bowels are composed, the strength of the patient must be supported by the use of tonics, and cordial remedies viz, bark or which is far better, and easier to be administered, the sulphate of quinine made into an emulsion; columbe root in tincture or decoction with a little laudanum; pnt wine, or claret, weak brandy and water &c &c but let whatever be given be in small quantities and often repeated, otherwise



The stomach will reject it, what appears to be of great importance in this disease (as well as every other) is a proper regulation of air. This branch of the materia medica has certainly been much neglected, and how far a particular regimen would be in curing disease is not known; but I suspect it would go much further than has yet been tried. I believe in this stage of the complaint our dependence may rest much on air; and particularly if we can with its help recourse to country air, the patient will most frequently rapidly regain strength, with no other remedy.

The air should be first of a gently stimulating kind: if the child be not weaned the milk of the mother is the best, if it is some of the farinaceous substances may be employed with advantage such as rye, tapioca, barley water, cracked & boiled down to a powder and boiled with milk, or which Dr. Chopman says is better, flour boiled in a cloth for two or three hours until it is —



perfectly hard than to be raised in milk.

The diet from animals should be first chicken broth, leaf tea, and calf foot jelly, smoked fish or ham will often be retained when every thing else is rejected. From these we may gradually increase to more nourishing articles of food as meats boiled, and roasted.

Before concluding these observations it may not be altogether inappropriate to say a few words on the prophylactic treatment of Cholera Infantum. for which I acknowledge myself almost entirely indebted to a paper with which Dr Parry has lately favoured the public.

First. Keep the child cool, and expose him to fresh air, for this purpose he should be carried frequently into the open squares, or beyond the suburbs of the city.

Second. Pay particular attention to coverings instead of a feather bed the child should be placed on a hard mattress or on blankets folded and laid upon the floor, the doors and windows open so that fresh

*[Faint, illegible handwriting visible through the paper, likely bleed-through from the reverse side.]*

air may be freely admitted.

Third. frequent ablutions with cool water, and its proper employment as a beverage;

Fourth. The state of the gums, if at all swollen or painful. They should be carefully palpated, and the operation should be repeated as often as their inflammatory condition may demand; and in severe cases, much good may be expected from the application of blisters behind the ears. The blistered surface should be maintained for some time by stimulating dressings;

Fifth. Avoid all flatulents, and indigestible foods during the first year the mother's milk is the most appropriate nutriment.

Sixth. When the stomach of the infant is very delicate the diet of the mother, should be strictly regulated and in all cases, it would be advisable for her to avoid articles of a flatulent nature;

Seventh. The occasional use of nutritious animal juices. The sucking of small pieces of lean or dried beef;

the way to the ocean  
the distance between the two  
is not more than a day's  
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trains of the Atlantic  
Coast is the one which  
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to Washington, and  
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which is most  
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Philadelphia.



Eighth. Quinine should be used habitually during the summer, in those cases where there is reason to apprehend the occurrence of cholera.

Ninth. The cold bath daily.

Tenth. The flannel sheet next to the skin.

Eleventh. Always let animal food enter into the diet of the child after weaning.

Finis

Virginia

On

Cholera Infantum

1894

11  
The first of the month I was  
in the country in the early  
part of the month. The weather  
was very cold and the  
ground was covered with  
snow. The first of the month  
I was in the country in the  
early part of the month.

Jan.